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<u>L4</u>	L2 same ((configur\$5 or process\$3) near5 (data or information))	11	<u>L4</u>
<u>L3</u>	L2 same ((configur\$5 or prcess\$3) near5 (data or information))	1	<u>L3</u>
<u>L2</u>	dock\$3 near10 (port near5 (media or medium or disk or disc or (input adj1 output) or (I adj1 O)))	159	<u>L2</u>
<u>L1</u>	dock\$3 near10 (port near5 (media or medium))	17	<u>L1</u>

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<u>L4</u>	L2 same ((configur\$5 or process\$3) near5 (data or information))	11	<u>L4</u>
<u>L3</u>	L2 same ((configur\$5 or process\$3) near5 (data or information))	1	<u>L3</u>
<u>L2</u>	dock\$3 near10 (port near5 (media or medium or disk or disc or (input adj1 output) or (l adj1 O)))	159	<u>L2</u>
<u>L1</u>	dock\$3 near10 (port near5 (media or medium))	17	<u>L1</u>

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Search Results -

Terms	Documents
L2 and (different near5 type)	36

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<u>L7</u>	L2 and (different near5 type)	36	<u>L7</u>
<i>DB=EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR</i>			
<u>L6</u>	L5	0	<u>L6</u>
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<u>L5</u>	L1 or L4	23	<u>L5</u>
<u>L4</u>	L2 same ((configur\$5 or process\$3) near5 (data or information))	11	<u>L4</u>
<u>L3</u>	L2 same ((configur\$5 or prcess\$3) near5 (data or information))	1	<u>L3</u>
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<u>L1</u>	dock\$3 near10 (port near5 (media or medium))	17	<u>L1</u>

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5864708.pn. and (dock\$3 same port)	1

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<u>L4</u>	11 and (dock\$3 same port)	1	<u>L4</u>
<u>L3</u>	11 and (dock\$3 or port)	8	<u>L3</u>
<u>L2</u>	11 and dock\$3	2	<u>L2</u>
<u>L1</u>	5802052.pn. or 5825772.pn. or 5845081.pn. or 5887187.pn. or 5987507.pn. or 5930257.pn. or 6006261.pn. or 5864708.pn.	8	<u>L1</u>

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Search Results -

Terms	Documents
5802052.pn. or 5825772.pn. or 5845081.pn. or 5887187.pn. or 5987507.pn. or 5930257.pn. or 6006261.pn. or 5864708.pn.	8

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 result set

DB=USPT; PLUR=YES; OP=OR

L1 5802052.pn. or 5825772.pn. or 5845081.pn. or 5887187.pn. or 5987507.pn.
 or 5930257.pn. or 6006261.pn. or 5864708.pn.

8 L1

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EAST - [Untitled1:1]

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Drafts
Pending
Active
L1: (76) (dock\$3 near10 port
L2: (27) l1 and (different r
Failed
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UDC
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Trash

Search Up Browse Queue Clear
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Default operator: OR
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☒ Highlight all hit terms initially

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	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	Error Definition	Err
1	BRS	L1	76	(dock\$3 near10 port) same ((configur\$5 or process\$3)	USPAT	2004/09/13 09:53			0
2	BRS	L2	27	l1 and (different near5 (type or kind))	USPAT	2004/09/13 09:54			0

Start Proxima SSO EAST - [Untitled1:1]

EAST - [Untitled1:1]

File View Edit Tools Window Help

Drafts

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Favorites

Tagged (0)

UDC

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Search

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OR

11 and (different near5 (type or kind))

BRS I...

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2	<input type="checkbox"/>	<input type="checkbox"/>	US 6497368 B1	20021224	32	Portable data collection	235/472.01	235/449; 235/462.13;
3	<input type="checkbox"/>	<input type="checkbox"/>	US 6439956 B1	20020827	18	RC car device	446/454	446/43; 446/91;
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6	<input type="checkbox"/>	<input type="checkbox"/>	US 6009247 A	19991228	7	Portable computer network	710/100	709/227; 709/249;
7	<input type="checkbox"/>	<input type="checkbox"/>	US 5961337 A	19991005	9	Universal charging and data communication apparatus	439/141	
8	<input type="checkbox"/>	<input type="checkbox"/>	US 5890997 A	19990406	73	Computerized system for the design, execution, and	482/8	482/9; 482/902;
9	<input type="checkbox"/>	<input type="checkbox"/>	US 5799068 A	19980825	66	Smart phone integration with computer systems	379/93.06	379/357.01; 710/13;
10	<input type="checkbox"/>	<input type="checkbox"/>	US 5799067 A	19980825	67	Smart phone integration with computer systems	379/93.06	379/357.04; 710/301
11	<input type="checkbox"/>	<input type="checkbox"/>	US 5781744 A	19980714	26	Method and apparatus for ensuring safe peripheral	710/304	710/15; 710/302;

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1 Experimental study of airflow and particle characteristics of a 300-1 POUP/LPU minienvironment system

Shih-Cheng Hu; Tzong-Ming Wu;

Semiconductor Manufacturing, IEEE Transactions on , Volume: 16 , Issue: 4 , 2003

Pages:660 - 667

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IEEE JNL

2 Object model creation from multiple range images: acquisition, calibration, model building and verification

Beraldin, J.-A.; Cournoyer, L.; Rioux, M.; Blais, F.; El-Hakim, S.F.; Godin, G.; 3-D Digital Imaging and Modeling, 1997. Proceedings., International Conference Recent Advances in , 12-15 May 1997

Pages:326 - 333

[\[Abstract\]](#)
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IEEE CNF

3 Planning and design of floating berths for passenger-only ferry terminal

Jaque, D.T.; Yang, F.L.; Demich, L.R.;

OCEANS '99 MTS/IEEE. Riding the Crest into the 21st Century , Volume: 2 , 1 Sept. 1999

Pages:848 - 861 vol.2

[\[Abstract\]](#)
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Object model creation from multiple range images: acquisition, calibration, model building and verification

Beraldin, J.-A. Courmoyer, L. Rioux, M. Blais, F. El-Hakim, S.F. Godin, G.

Inst. for Inf. Technol., Nat. Res. Council of Canada, Ottawa, Ont., Canada;

This paper appears in: 3-D Digital Imaging and Modeling, 1997. Proceedings., International Conference on Recent Advances in

Meeting Date: 05/12/1997 - 05/15/1997

Publication Date: 12-15 May 1997

Location: Ottawa, Ont. Canada

On page(s): 326 - 333

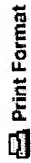
Reference Cited: 12

Number of Pages: x+353

Inspec Accession Number: 5596210

Abstract:

This paper demonstrates the accuracy of a prototype Laser Range Camera (LRC) developed at the National Research Council of Canada for the creation of models of real objects. A laser survey performed in collaboration with the Canadian Space Agency and NASA is used as a test case. The object selected for this particular test case is the Orbiter Docking System (ODS) located at the Kennedy Space Center, Florida. During the laser survey, 128 range (and registered intensity) images were acquired all around the ODS.



Print Format

These images were then **processed** in our laboratory. A full model of the top **portion** of the ODS was created along with an almost complete model of the ODS. The ODS has a diameter of 1.6 m and a height of 3.9 m. Targets mounted on the top **portion** of the ODS were used to assess the accuracy of the calibration and of the image registration **process**. These targets were measured with a network of theodolites a day prior to the laser survey and used as a reference. With the current calibration and range image registration techniques, an accuracy better than 0.25 mm in X and Y, and, 0.80 mm in Z was achieved. These results compare favorably with the single point accuracy obtained after calibration, i.e., about 0.25 mm in X and Y, and, 0.50 mm in Z. These figures and others should testify on the usefulness of a LRC for accurate model building

Index Terms:

[calibration](#) [image registration](#) [solid modelling](#) [virtual reality](#) [calibration](#) [image registration](#) [process](#) [laser survey](#) [model building](#) [multiple range images](#) [object model creation](#) [orbiter docking system](#) [prototype laser range camera](#) [single point accuracy](#) [theodolites](#)

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Experimental study of airflow and particle characteristics of a 300-mm POU/LPU minienvironment system

Shih-Cheng Hu Tzong-Ming Wu

Dept. of Air-Conditioning & Refrigeration Eng., Nat. Taipei Univ. of Technol., Taiwan

This paper appears in: Semiconductor Manufacturing, IEEE Transactions on

Publication Date: Nov. 2003

On page(s): 660 - 667

Volume: 16, Issue: 4

ISSN: 0894-6507

Inspec Accession Number: 7790719

Abstract:

This study examines the airflow and particle characteristics of a front opening unified pod/load port unit (FOUP/LPU) minienvironment system. The airflow and particle number were measured by using a three-dimensional ultrasonic anemometer and an He-Ne laser airborne particle counter, respectively. A large vortex is produced below an extracted wafer in the minienvironment. This vortex extends to the lower part of the minienvironment and reaches the door opener of the LPU. Particles produced on the moving parts of the LPU were carried to the back surface of the wafer, which were at the lowest position (the first wafer). How the open ratio of the perforated plate of the minienvironment affects the pressure difference between the minienvironment and



surrounding environment and the airflow through the minienviroment was determined. The thoroughly elucidated information is useful for mitigating contamination when planning a fabrication line and designing a production tool.

Index Terms:

clean rooms integrated circuit manufacture semiconductor process modelling turbulence vortices 300 mm POUP/LPU minienviroment system airflow characteristics airflow patterns contamination control cost-effective wafer docking fabrication line planning front opening unified pod/load port unit large vortex laser airborne particle counting particle characteristics pressure difference production tool design three-dimensional ultrasonic anemometry

Documents that cite this document

There are no citing documents available in IEEE Xplore at this time.

Reference list:

- 1, *I300I 300 mm Equipment Performance Metrics* Austin, TX: International SEMATECH, 1996.
- 2, *Asyst Standard Mechanical Interface Indexer (SMIF-INX) 2200 Evaluation* Austin, TX: International SEMAECH, Technology Transfer #98053510 A-TR, 1998.
- 3, S. Abu-Zaid, "Airflow analysis of various LPT 2200 configuration," in *Proc. 43th IES Annu. Tech. Meeting*: Inst. of Environment Sci., 1997, pp. 139-147.
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7, *Integrated Minienviroment Design Best Practices* Austin, TX: International SEMAECH, Technology Transfer #99033693A-ENG, 1999.

8, H. Seita, A. Fujii, T. Suruki, S. Kimoto, O. Shippou, K. Fujiwara, and K. Tokunaga, "Improvemnet of 300 mm FOUN mini-environment," in *2001 IEEE Int. Semiconductor Manufacturing Symp.*, 2001, pp. 503-506.
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L1: Entry 7 of 8

File: USPT

Oct 20, 1998

US-PAT-NO: 5825772

DOCUMENT-IDENTIFIER: US 5825772 A

TITLE: Distributed connection-oriented services for switched communications networks

DATE-ISSUED: October 20, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Dobbins; Kurt	Bedford	NH		
Grant; Thomas A.	Derry	NH		
Ruffen; David J.	Salem	NH		
Kane; Laura	Merrimack	NH		
Len; Theodore	Amherst	NH		
Andlauer; Philip	Londonderry	NH		
Bahi; David H.	Manchester	NH		
Yohe; Kevin	Amherst	NH		
Fee; Brendan	Nashua	NH		
Oliver; Chris	Rochester	NH		
Cullerot; David L.	Manchester	NH		
Skubisz; Michael	Durham	NH		

US-CL-CURRENT: 370/396; 370/401, 370/410

ABSTRACT:

Method and apparatus providing connection-oriented services for packet switched data communications networks. Directory services include distributed discovery of MAC addresses and protocol alias addresses. Topology services include a link state topology exchange among switches, which provides each switch with a complete topology graph of the network. This enables an access switch receiving a data packet to determine a complete path from a source end system to a destination end system. Another service includes resolution of broadcast frames to unicast frames, in order to reduce the amount of broadcast traffic. Policy restrictions may be applied prior to connection setup. Path determination services enable multiple paths from a source to a destination. Connection management includes source routed mapping of connections on the desired path. A distributed call rerouting service is provided wherein if a link on an active path fails, each switch receives a topology change notification and unmaps any connection involving the failed link. A broadcast/unknown service provides restricted flooding of nonresolvable packets. Furthermore, connection-oriented switching is provided based on the source and destination MAC addresses as a connection identifier. Still further, resolution of networks outside the switch domain is enabled by access switches listening for network and server route advertisements and maintaining best routes to said networks and servers. The best route metrics may be combined with best path metrics to determine a path from a first access switch to an egress switch connected to the

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L2: Entry 1 of 3

File: USPT

Dec 21, 1999

US-PAT-NO: 6006261

DOCUMENT-IDENTIFIER: US 6006261 A

**** See image for Certificate of Correction ****

TITLE: Internet protocol assists using multi-path channel protocol

DATE-ISSUED: December 21, 1999

INT-CL: [06] G06 F 13/00

US-CL-ISSUED: 709/224; 709/236, 370/400, 370/402

US-CL-CURRENT: 709/224; 370/400, 370/402, 709/236FIELD-OF-SEARCH: 395/200.54, 395/200.75, 395/200.65, 395/200.69, 395/200.48,
395/200.66, 370/392, 370/402, 370/400, 370/390, 709/224, 709/245, 709/235, 709/239,
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external network.

29 Claims, 31 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 20

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US-PAT-NO: 5961337

DOCUMENT-IDENTIFIER: US 5961337 A

TITLE: Universal charging and data communication apparatus

----- KWIC -----

Brief Summary Text - BSTX (6):

Consequently, there is a need for a standardized universal electrical and data communication port which can be used with a variety of portable computer and docking configurations and eliminates the need for a customized configuration of electrical contacts and data communication links for each new data terminal design.

Brief Summary Text - BSTX (10):

The dock employing the universal connector according to the present invention can be configured in a number of ways to accommodate either a single hand-held data terminal, multiple data terminals of the same type, or multiple data terminals of different types, etc. The docking apparatus can be of a stationary type, i.e., mounted on a table, wall, or other stationary fixture, or may be a mobile dock for use in a vehicle such as a delivery truck, forklift, etc., allowing charging via a vehicle's electrical system and/or data communication with a LAN or WAN, peripheral devices such as fax, modem, optical readers, printers, and the like.



US005961337A

United States Patent [19]

Kordes

[11] Patent Number: **5,961,337**
 [45] Date of Patent: **Oct. 5, 1999**

[54] UNIVERSAL CHARGING AND DATA COMMUNICATION APPARATUS

[75] Inventor: Kurt A. Kordes, Pleasanton, Calif.

[73] Assignee: Norand Corporation, Cedar Rapids, Iowa

[21] Appl. No.: 08/977,073

[22] Filed: Nov. 24, 1997

Related U.S. Application Data

[60] Provisional application No. 60/031,502, Nov. 27, 1997.

[51] Int. Cl.⁶ H01R 13/44

[52] U.S. Cl. 439/141

[58] Field of Search 439/141, 140, 439/63

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Primary Examiner—Neil Abrams

Assistant Examiner—T C Patel

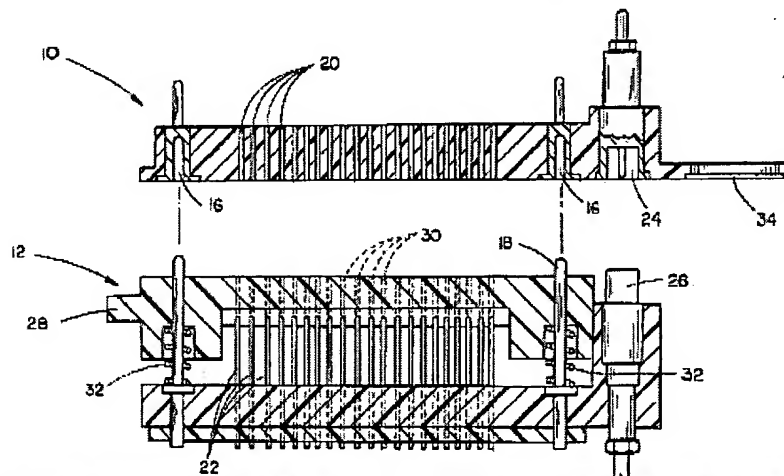
Attorney, Agent, or Firm—Silver & Associates PC

[57]

ABSTRACT

A universal recharging and data communication apparatus for electrically and communicatively connecting a handheld or portable data terminal with a data terminal docking unit comprises mating modules for electrical coupling and data or signal communication. The design of data terminals and docking stations is simplified and the need for a specialized or customized arrangement for the electrical and data communication interface is eliminated by providing the necessary electrical and data links together. In a preferred embodiment, the data communication is provided by a plurality of pins and mating contacts whereby a moveable housing protects the pins when a data terminal is not in the data terminal dock.

18 Claims, 4 Drawing Sheets



US-PAT-NO: 5781744

DOCUMENT-IDENTIFIER: US 5781744 A

TITLE: Method and apparatus for ensuring safe peripheral
connection

----- KWIC -----

Claims Text - CLTX (5):

wherein the data processing system is a docking station, and the peripheral port is a docking port.

Claims Text - CLTX (9):

wherein a plurality of different types of devices can peripheral port, and

Claims Text - CLTX (89):

wherein the data processing system is a docking station, and the peripheral port is a docking port.

Claims Text - CLTX (95):

wherein the data processing system is a docking station and the port is a docking port.

Claims Text - CLTX (106):

wherein the data processing system is a docking station and the port is a docking port.



(11) Patent Number: 5,781,744

[45] **Date of Patent:** Jul. 14, 1998

- | | | | |
|-----------|---------|--------------------|---------|
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- Primary Examiner**—Glenn A. Auye
Attorney Agent, or Firm—Beyer & Weaver, LLP

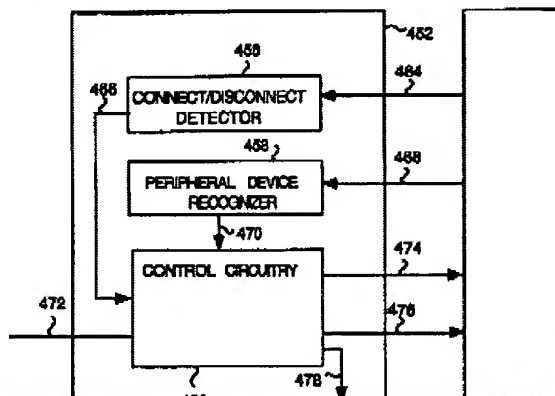
- [57]
- ABSTRACT**

- An input/output interface apparatus that allows a computer system to have less ports and greater safety with the connection of peripheral devices to the ports is disclosed. The input/output interface apparatus enables the computer system to supply multiple bus standards to a single flexible port of the computer system. The input/output interface apparatus permits safe connection of a peripheral device to a port of the computer system when the computer system is powered-on (so called hot-plugging or hot-docking).

- 45 Claims, 19 Drawing Sheets**

- 45 Claims, 19 Drawing Sheets**

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L3: Entry 1 of 1

File: USPT

Jan 26, 1999

DOCUMENT-IDENTIFIER: US 5864708 A

TITLE: Docking station for docking a portable computer with a wireless interface

Brief Summary Text (11):

In various embodiments of the present invention, the wireless transceiver transmits and receives infrared signals. Alternatively, other media may be used such as optical fibers, radio signals or some other wireless media.

Brief Summary Text (12):

The wireless communication may be established between the docking station and the portable computer in a variety of ways. For example, an optical cable may be used to connect the docking station to the portable computer. Alternatively, the docking station may include a flat pad on which is placed the portable computer. In one embodiment, the flat pad includes both an infrared transceiver and a low profile inductor. The low profile inductor is used to provide power to the portable computer.

Drawing Description Text (6):

FIG. 6 shows a docking station and a portable computer communicating using an optical fiber in accordance with an alternate preferred embodiment of the present invention.

Drawing Description Text (7):

FIG. 7 shows a docking station and a portable computer communicating using wireless communication and an optical fiber in accordance with another alternate preferred embodiment of the present invention.

Detailed Description Text (2):

FIG. 1 shows a block diagram of a docking station 62 which provides for wireless communication with a portable computer 61. A wireless transceiver 63 within portable computer 61 communicates with a wireless transceiver 64 within docking station 62. For example, communication is done using an Infrared Data Association (IrDA) standard infrared data link or some other protocol for optical communication. Alternate to optical transmission, other transmission media may be used. For example, radio frequency transmissions or other wireless transmission technology may be used in place of optical transmission.

Detailed Description Text (11):

FIG. 6 shows another embodiment in which a portable computer 40 is connected to a docking station 41 by a cable 48. Cable 48 includes for example optical fibers. In addition, cable 48 may include a power line (DC or AC). Cable 48 connects to a single connect point on portable computer 40. Docking station 41 includes, for various ports, a physical connector 42, a physical connector 43, a physical connector 44, a physical connector 45, a physical connector 46 and a physical connector 47.

Detailed Description Text (13):

Optionally, infrared transceiver 53 may include a large enough array of optical

fibers so that a communication link may be established between flat pad 51 and portable computer 40 for a large alignment range. This is done, for example, by spreading the fibers at flat pad 51 into a wide pattern. Alternatively, if desired, logical alignment could be used over the large alignment range. Logical alignment is accomplished, for example, by interrogating the array of receiving fibers in infrared transceiver 53 to determine which receptors are receiving transmission from portable computer 40. This would determine which transmitting and receiving fibers are used by infrared transceiver 53 to communicate with portable computer 40.

Detailed Description Text (15):

Alternatively, flat pad 51 may be connected to portable computer 40 through an optical cable as described above.

Detailed Description Text (18):

As shown in FIG. 7, flat pad 51 is connected to docking station 41 by a cable 58. Cable 58 includes for example optical fibers. In addition, cable 58 may include a power line (DC). Physical connectors 42-47 for various ports are included in docking station 41. Alternatively, docking station 41 may be implemented within flat pad 51 so that the physical connections for the various ports are placed at, for example, a rear end of flat pad 51.

CLAIMS:

8. A portable computing system as in claim 7 additionally comprising:

an optical cable for connecting the docking station to the portable computer.

19. A docking station as in claim 15 additionally comprising:

an optical cable for connecting the docking station to the portable computer.

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L7: Entry 1 of 1

File: USPT

Dec 21, 1999

DOCUMENT-IDENTIFIER: US 6006261 A

**** See image for Certificate of Correction ****

TITLE: Internet protocol assists using multi-path channel protocol

Brief Summary Text (8):

Three basic methods are now available to interconnect both local and remote area networks to one another as to provide wide used access and remote information exchange capabilities. These three methods are 1) bridges or data-link devices that connect similar networks together; 2) routers that perform routing services by maintaining a routing table in each host; and 3) gateway devices that carry out protocol conversions and other connectivity functions. Typically, a device driver for the gateway is provided with modems or other physical ports that can be linked to switched communication WANS.

Brief Summary Text (10):

In the existing mechanisms, gateway devices are implemented on top of the LAN device drivers as a switched communications device interface. The user initialization of the communication link-up procedure redirects the user hardware commands to the gateway. The communications interface in the gateway driver then institutes and maintains the switched communications link, diverting hardware resources of the driver to do so. The connection and access procedures are then executed using the gateway ports and modems in order to link the user's system with the switched communications network. A remote connection is established through the LAN/WAN which sets up a point to point configuration through the port along the communication line between the user and the communications device in use.

[Previous Doc](#) [Next Doc](#) [Go to Doc#](#)

[First Hit](#) [Fwd Refs](#)[Previous Doc](#)[Next Doc](#)[Go to Doc#](#)

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L10: Entry 6 of 11

File: USPT

Sep 18, 2001

DOCUMENT-IDENTIFIER: US 6290517 B1

TITLE: Fold out port group for portable computer

Detailed Description Text (6):

The housing, in one embodiment, defines a rectangular parallelepiped shape having a second or lower surface 107 defining the bottom of the housing and four side or edge surfaces 110 defining the perimeter. It is noted that throughout this specification, the terms upper, lower, front, back, side, and the like are used to describe the illustrated embodiments. These terms are provided for descriptive purposes only and by no means limit the scope of the invention. To simplify the discussion, the edge surfaces 110 will be specifically identified as front surface 110f, rear surface 110r, and side surface 110s. A flip-up display screen 112 is hingedly connected to the housing 108 generally along the intersection of the upper surface 106 and the rear surface 110r. The rear surface 110r comprises various I/O ports 114 necessary to interface the computer 100 to external devices (not shown). It is noted that while different port configurations are shown, they are generically referred to herein as input/output or "I/O ports." They may include ports adapted for most any device and utilizing most any communication protocol including: RS-232, IEEE 1394, parallel, infrared, PS/2, USB, audio/video, RJ45 (network), RJ-11 (modem), small computer system interface (SCSI), national television standards committee (NTSC), and various proprietary connectors (docking station, port replicator) to name a few.

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L10: Entry 6 of 11

File: USPT

Sep 18, 2001

US-PAT-NO: 6290517

DOCUMENT-IDENTIFIER: US 6290517 B1

TITLE: Fold out port group for portable computer

DATE-ISSUED: September 18, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Anderson; Glen J.	Sioux City	IA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Gateway, Inc.	North Sioux City	SD			02

APPL-NO: 09/ 375327 [\[PALM\]](#)

DATE FILED: August 17, 1999

INT-CL: [07] [H01](#) [R](#) [13/44](#)

US-CL-ISSUED: 439/131

US-CL-CURRENT: [439/131](#)

FIELD-OF-SEARCH: 439/131, 439/946, 439/946.2, 439/676, 439/638, 439/344

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

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<input type="checkbox"/>	6093038	July 2000	Chen et al.	439/131

ART-UNIT: 289

PRIMARY-EXAMINER: Abrams; Neil

ASSISTANT-EXAMINER: Duverne; J. F.

ATTY-AGENT-FIRM: Schwegman, Lundberg, Woessner & Kluth, P.A. Cool; Kenneth J.

ABSTRACT:

A notebook computer incorporating a fold out port group incorporating a plurality of I/O ports is herein provided. The port group is hingedly attached to the computer and pivots between a first, stored position and a second, extended position. In the second, extended position, the port group permits convenient access to the ports thereon and further defines a leg to elevate one end of the computer. Ports may be accessible while the port group is in the first, stored position as well. In one embodiment, the port group, while in the first position, is stored within a slot on the bottom of the computer housing. In another embodiment, the port group selectively covers the rear surface of the computer in the stored position and pivots to expose the rear surface when placed in the extended position. The port group may be interchangeable with other port groups to customize the computer for a particular market or particular application.

21 Claims, 13 Drawing figures

[Previous Doc](#)

[Next Doc](#)

[Go to Doc#](#)

[First Hit](#) [Previous Doc](#) [Next Doc](#) [Go to Doc#](#)

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L5: Entry 3 of 23

File: PGPB

Jul 29, 2004

DOCUMENT-IDENTIFIER: US 20040148445 A1

TITLE: Docking station for portable computer

CLAIMS:

20. The machine-readable medium of claim 17, wherein the docking station comprises a docking port, the operations further comprising: determining whether the portable computer is physically connected to the docking station based on a state of a ground connection pin of the docking port.

[Previous Doc](#) [Next Doc](#) [Go to Doc#](#)

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L5: Entry 3 of 23

File: PGPB

Jul 29, 2004

PGPUB-DOCUMENT-NUMBER: 20040148445

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040148445 A1

TITLE: Docking station for portable computer

PUBLICATION-DATE: July 29, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Lee, Cheon-Moo	Suwon city		KR	
Lee, Il-Han	Seoul city		KR	

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	COUNTRY	TYPE CODE
SAMSUNG ELECTRONIC CO., LTD.	Suwon-city		KR	03

APPL-NO: 10/ 679320 [PALM]

DATE FILED: October 7, 2003

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	DOC-ID	APPL-DATE
KR	2003-4884	2003KR-2003-4884	January 24, 2003

INT-CL: [07] G06 F 13/12

US-CL-PUBLISHED: 710/072

US-CL-CURRENT: 710/72

REPRESENTATIVE-FIGURES: 2

ABSTRACT:

A network connection state can be conveniently changed to a wired or a wireless connection state according to whether a portable computer body is attached to a docking station including an Access Point part or not.

[Previous Doc](#) [Next Doc](#) [Go to Doc#](#)

[First Hit](#)[Previous Doc](#)[Next Doc](#)[Go to Doc#](#)

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L5: Entry 6 of 23

File: PGPB

Aug 28, 2003

DOCUMENT-IDENTIFIER: US 20030163625 A1

TITLE: Switch architecture independent of media

Abstract Paragraph:

A network device for handling data and a method for handling data in a network device are disclosed. The network device includes at least one media port and at least one high speed docking station, communicating with the at least one media port. At least one master is provided in the network device, where the at least one master is connected to the at least one high speed docking station. The master is configured to handle and process data received by the at least one media port and passed to the master through the at least one high speed docking station. The network device is configured to handle media ports of different media types. Thus, the device can handle data received through different media ports that have different media types with the same master, making the network device easily configured to meet a customer's needs.

Summary of Invention Paragraph:

[0011] According to one aspect of this invention, a network device for handling data is disclosed. The network device includes at least one media port and at least one high speed docking station communicating with the at least one media port. At least one master is connected to the at least one high speed docking station, where the at least one master is configured to handle and process data received by the at least one media port and passed to the at least one master through the at least one high speed docking station. The network device is configured to handle media ports of different media types.

Summary of Invention Paragraph:

[0012] Additionally, the network device can be configured to handle media ports of different media types utilizing the same high speed docking station or utilizing different high speed docking stations. The at least one media port can also tag incoming data with tags that can be used by the at least one master to categorize the data. These tags provide information on a source port and a destination port for the received data and a media type ID for the at least one media port.

Summary of Invention Paragraph:

[0014] Also, the network device can also have at least one high speed docking station that does not create any back-pressure for incoming data from the at least one media port. This can be accomplished wherein each media port of the network device has a maximum bandwidth and the at least one high speed docking station has a bandwidth that is greater than a sum of each maximum bandwidth of each media port of the network device.

Summary of Invention Paragraph:

[0017] The network device can include at least two masters and at least two high speed docking stations, where the masters are connected through a first high speed docking station and at least one of the masters is connected to the at least one media port through a second two high speed docking station.

Summary of Invention Paragraph:

[0018] In another aspect of the invention, a method of handling data in a network

device is disclosed. Incoming data is received at a media port and then forwarded to a high speed docking station. The data is packed and passed to a master, where at least a portion of the packed data is processed. The data is forwarded to another media port based on the processed contents of the at least a portion of data. A first media type of the media port is either the same or different from a second media type of the another media port.

Summary of Invention Paragraph:

[0019] The invention is also embodied in a method of handling data in a network device. Incoming data is received at a media port and then forwarded to a high speed docking station. The data is packed and passed to a master, where at least a portion of the packed data is processed. The data is forwarded to another media port based on the processed contents of the at least a portion of data. A first media type of the media port is either the same or different from a second media type of the another media port.

Summary of Invention Paragraph:

[0020] In addition, the method can include forwarding the data to a second high speed docking station communicating with the another media port. The forwarding step can also include passing through a second master and other high speed docking station to reach the destination media port for the data.

Detail Description Paragraph:

[0028] The Docking Station 102 is basically like a "Transit Hall" between the Master and the Media Ports with zero waiting and loss-less byte Transfer. That is to say, that Docking Station does not block or create any Back-Pressure for incoming Bytes from Media Ports. And the Docking Station does not introduce any clock gaps in the Byte stream between Media Ports and master. The Docking Station acts as a facilitator and will simply keep pushing the Bytes from one end to another with appropriate tag bits to identify the start or end of valid Byte streams. The actual Packet formation will be performed by the Master or by the Media Port at their respective ends.

Detail Description Paragraph:

[0029] This Docking Station must have excess bandwidth such that the total is greater than the sum of all of the Media Ports maximum bandwidth. The excess bandwidth is needed to account for the overhead of extra bytes of tag insertion and processing actions performed by it.

Detail Description Paragraph:

[0032] 2. The Packet Lanes transfer data streams between Media ports and the Docking interface;

Detail Description Paragraph:

[0035] The Packet Lane 104 is the passage or a conduit to transfer the information as Packets or as Bytes between individual Media ports and the Docking station. The Packet Lane, in general, will not modify any of the information being transported by it, unless specifically required by an implementation.

Detail Description Paragraph:

[0036] The Packet lane can be implemented as a shared Bus or as a point to point full (or half) duplex bus between a Media port and the Docking station. The exact implementation depends on the bandwidth, latency and other factors as per the specific implementation requirements.

Detail Description Paragraph:

[0037] Implementation examples include point to point and shared bus examples. For point to point, the MAC of each Media port is directly connected to the Docking Station and the Docking Station takes care of steering the packets between the Master and the respective MAC of the Media Port. In a shared bus, a high speed

shared bus interconnects all Media ports and the Docking Station. The shared bus protocol takes care of steering the packets or bytes between with the Media Port and the Docking Station.

Detail Description Paragraph:

[0040] For the un-packing process the packets being sent by the Master to Media ports through the High Speed Dock interface are un-packed into Bytes by the respective Service Agents.

Detail Description Paragraph:

[0042] For example, for a 48 port 100 Mbit+4 port 1 Gigbit integrated Media Module (total aggregate Bandwidth: 17.6 Gig Bits/sec), a Docking Station employing a 10-Gigabit XGMII Mac (maximum bandwidth supported: 20.0 Gig Bits/sec) is integrated within both Master and Media DOCK ends. The Media Ports interface to the Docking Station on dedicated Byte Lanes from each Media Port. The Docking Station at Media Port end continuously multiplex the Byte Lanes onto its XGMII in a round robin fashion. The Docking Station at the Master Module end will receive these Bytes on its end of XGMII interface in a Round Robin way. Similarly, Bytes from Master module will be transferred to the Media Port.

Detail Description Paragraph:

[0043] A Tagging technique, depending upon the implementation requirements, is defined to indicate valid Byte and Source and Destination Media port ID. Depending upon the High Speed link interface used for the Docking Station, the incoming Bytes from the Media ports will be packed into a "Cell Format" (CF). This format (CF) is an implementation requirement specific standard across any Media Type and will provide basic set of information on the Source Media Port ID, the Media Type ID, the Length of Valid Data Bytes and other fields, as needed. The additional fields can contain CRC or checksum and other information if there is availability of excess Bandwidth.

Detail Description Paragraph:

[0044] The Media port block is a collection of "n" ports, consisting of any combination of the following logic blocks integrated in it: PHY, MAC and Packet or Information Processing Logic. The value "n" is dependent more on the silicon implementation of the Master in terms of capability of the Master to provide "n" Service agents and corresponding Memory and logic blocks. It also depends on the fact that the maximum bandwidth supported by Docking station must be greater than aggregate bandwidth of "n" media port blocks.

Detail Description Paragraph:

[0054] The architecture of the present invention provides an innovative solution for multiple applications, thereby achieving the following goals. The architecture is universal and has a broad application range from Multimedia, Networking, Storage. The architecture is also unique and allows for a fast time to market. The architecture is easy to adapt to any new MAC/PHY technology. The architecture is also scalable such that multi master stacks can provide bigger configuration solutions. Such an embodiment is illustrated in FIG. 2, with multiple Masters 201 connected to Media Ports 203 through high speed Docking Station 202 through Packet Lanes 204.

CLAIMS:

1. A network device for handling data comprising: at least one media port; at least one high speed docking station communicating with said at least one media port; and at least one master connected to said at least one high speed docking station, said at least one master configured to handle and process data received by said at least one media port and passed to said at least one master through the at least one high speed docking station; wherein said network device is configured to handle media ports of different media types.

2. A network device for handling data as recited in claim 1, wherein said network device is configured to handle media ports of different media types utilizing the same at least one high speed docking station.

3. A network device for handling data as recited in claim 1, wherein at least one high speed docking station comprises at least two high speed docking stations and said network device is configured to handle media ports of different media types utilizing different high speed docking stations of said at least two high speed docking stations.

5. A network device for handling data as recited in claim 1, wherein said at least one high speed docking station does not create any back-pressure for incoming data from said at least one media port.

6. A network device for handling data as recited in claim 5, wherein each media port of the network device has a maximum bandwidth and said at least one high speed docking station has a bandwidth that is greater than a sum of each maximum bandwidth of each media port of the network device.

22. A network device for handling data as recited in claim 1, wherein said at least one master comprises at least two masters and said at least one high speed docking station comprises at least two high speed docking stations, wherein said at least two masters are connected by a first of said at least two high speed docking stations and at least one of said at least two masters is connected to said at least one media port through a second of said at least two high speed docking stations.

24. A method of handling data as recited in claim 23, wherein said media port further comprises a port and a packet lane connected to said docking station and wherein said step of forwarding said data to a high speed docking station comprises forwarding data through the packet lane to the docking station.

27. A method of handling data as recited in claim 23, wherein the step of forwarding said data to another media port comprises forwarding said data to a second high speed docking station communicating with said another media port.

28. A method of handling data as recited in claim 27, wherein the second high speed docking station is connected to a second master and the another media port communicates with a third high speed docking station connected to the second master and said forwarding occurs between the first master, the second high speed docking station, the second master and the third high speed docking station.

[Previous Doc](#)

[Next Doc](#)

[Go to Doc#](#)

[First Hit](#) [Previous Doc](#) [Next Doc](#) [Go to Doc#](#)

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L5: Entry 6 of 23

File: PGPB

Aug 28, 2003

PGPUB-DOCUMENT-NUMBER: 20030163625

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030163625 A1

TITLE: Switch architecture independent of media

PUBLICATION-DATE: August 28, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Kadambi, Shiri	Los Altos Hill	CA	US	
Ambe, Shekhar	San Jose	CA	US	
Relan, Sandeep	Bangalore		IN	

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	COUNTRY	TYPE CODE
Broadcom Corporation				02

APPL-NO: 10/ 079576 [PALM]

DATE FILED: February 22, 2002

INT-CL: [07] G06 F 13/00

US-CL-PUBLISHED: 710/303

US-CL-CURRENT: 710/303

REPRESENTATIVE-FIGURES: 1

ABSTRACT:

A network device for handling data and a method for handling data in a network device are disclosed. The network device includes at least one media port and at least one high speed docking station, communicating with the at least one media port. At least one master is provided in the network device, where the at least one master is connected to the at least one high speed docking station. The master is configured to handle and process data received by the at least one media port and passed to the master through the at least one high speed docking station. The network device is configured to handle media ports of different media types. Thus, the device can handle data received through different media ports that have different media types with the same master, making the network device easily configured to meet a customer's needs.

[Previous Doc](#) [Next Doc](#) [Go to Doc#](#)

communications port for operational connection to a docking base; wherein the MCRC must be coupled to the docking base to operate, the docking base comprising a connection port for operationally receiving the connector, whereby media content can be communicated from the docking base through the MCRC to a receiving device.

[Previous Doc](#)

[Next Doc](#)

[Go to Doc#](#)

[First Hit](#) [Fwd Refs](#)[Previous Doc](#)[Next Doc](#)[Go to Doc#](#)

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L5: Entry 14 of 23

File: USPT

Jul 27, 2004

US-PAT-NO: 6767253

DOCUMENT-IDENTIFIER: US 6767253 B1

TITLE: Media-component docking system

DATE-ISSUED: July 27, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Werner; Shane Robert	Olathe	KS		
Parker; Benjamin James	Overland Park	KS		
Bloomcamp; Eric Michael	Olathe	KS		
Aubrecht; Nolan Christian	Overland Park	KS		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE	CODE
Sprint Communications Company L.P.	Overland Park	KS				02

APPL-NO: 10/ 289030 [\[PALM\]](#)

DATE FILED: November 6, 2002

INT-CL: [07] [H01](#) [R 25/00](#)

US-CL-ISSUED: 439/638

US-CL-CURRENT: [439/638](#)

FIELD-OF-SEARCH: 439/638, 439/650, 439/651, 439/652, 439/653, 439/654, 361/663, 361/686

PRIOR-ART-DISCLOSED:

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	6034869	March 2000	Lin	361/686

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<input type="checkbox"/>	<u>6233141</u>	May 2001	Lee et al.	361/683

ART-UNIT: 2839

PRIMARY-EXAMINER: Patel; Tulsidas C.

ABSTRACT:

A media docking station and is provided. A detachable media-content-receiving receiving component (MCRC) includes a connector that mates with a connection port of a docking base. The connection port operationally receives the connector. The docking base is equipped with a plurality of communications ports for communicating media content to a receiving devices inputted thorough said communications ports. In an alternative embodiment, an adapter is provided for mating a conventional MCRC with a base member.

37 Claims, 9 Drawing figures

Previous Doc

Next Doc

Go to Doc#

[First Hit](#)[Previous Doc](#)[Next Doc](#)[Go to Doc#](#)

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L7: Entry 3 of 36

File: PGPB

Mar 18, 2004

DOCUMENT-IDENTIFIER: US 20040054623 A1

TITLE: Mobile lottery terminal including features facilitating use by visually impaired ticket agents

Detail Description Paragraph:

[0041] Street retailers may carry the handheld terminal for several hours before resting. Thus, even a lightweight device will become a burden after several hours. For this reason, a mounting device is included to facilitate the mounting of the terminal. The mounting device may be located on the terminal in a position that does not interfere with the connection of the terminal to any peripheral (such as a docking station), e.g., on the end of the device opposite the location of the I/O ports. Alternatively., mounting hardware may be removable to facilitate docking. It will be appreciated that many different possible mounting configurations and types of hardware may be employed. For example, Velcro, clips, rings, etc may be attached to the housing of the terminal and used to attach the terminal to a belt or shoulder strap. Alternatively, loops through which a belt may be threaded may be attached or integrally molded as part of the housing. Other forms of attachment may also be employed, e.g., the device may be held in a partially enclosed pouch on a belt or shoulder strap that still leaves the keypad, customer input devices, and printer accessible.

[Previous Doc](#)[Next Doc](#)[Go to Doc#](#)

[First Hit](#) [Previous Doc](#) [Next Doc](#) [Go to Doc#](#)☐ [Generate Collection](#) [Print](#)

L7: Entry 3 of 36

File: PGPB

Mar 18, 2004

PGPUB-DOCUMENT-NUMBER: 20040054623
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20040054623 A1

TITLE: Mobile lottery terminal including features facilitating use by visually
impaired ticket agents

PUBLICATION-DATE: March 18, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Collins, Christopher	Lincoln	RI	US	
Businger, Kurt	Warwick	RI	US	
Hultzman, Scott	Putnam	CT	US	
Romano, Kevin	Barcelona	MA	ES	
Letiecq, Dana	Millbury		US	

APPL-NO: 10/ 453772 [\[PALM\]](#)

DATE FILED: June 2, 2003

RELATED-US-APPL-DATA:

Application is a non-provisional-of-provisional application 60/386506, filed June
5, 2002,

Application is a non-provisional-of-provisional application 60/435434, filed
December 20, 2002,

INT-CL: [07] [G06 F 17/60](#)

US-CL-PUBLISHED: 705/039

US-CL-CURRENT: [705/39](#)

REPRESENTATIVE-FIGURES: 5

ABSTRACT:

A mobile lottery terminal is disclosed. The mobile lottery terminal includes a processor. The mobile lottery terminal may include a Braille keypad in communication with the processor. The mobile lottery terminal may also include a customer information input device in communication with the processor and operable to input information indicative of a customer-selected lottery number. A system incorporating mobile lottery terminals and method of vending lottery tickets using mobile lottery terminals is also disclosed.

PRIORITY CLAIM AND RELATED APPLICATIONS

[0001] This application claims priority from previously filed U.S. provisional

patent applications No. 60/386,506 filed Jun. 5, 2002 and No. 60/435,434 filed Dec. 20, 2002. Both of these provisional applications are incorporated by reference in the present application in their entirety. A related U.S. utility application, Method and Device for Data Input, naming Christopher Collins et al as inventors, is being filed concurrently with the present application.

[Previous Doc](#)[Next Doc](#)[Go to Doc#](#)

[First Hit](#) [Fwd Refs](#)[Previous Doc](#)[Next Doc](#)[Go to Doc#](#)

Generate Collection

Print

L7: Entry 29 of 36

File: USPT

Jan 26, 1999

DOCUMENT-IDENTIFIER: US 5864708 A

TITLE: Docking station for docking a portable computer with a wireless interface

Brief Summary Text (4):

One way to increase the versatility of portable computers is to provide for a docking station. The docking station when connected to a portable computer provides for a number of different types of ports. These ports are used, for example, to drive a large monitor, communicate with various peripherals provide connection to a network, and so on. See for example, U.S. Pat. No. 5,283,714 issued to Collins Tsai, et al, for "Docking Apparatus for a Portable Computer."

Brief Summary Text (10):

For example, in one embodiment of the present invention, the docking station includes a port for an input/output bus interface. The translation manager includes a bus generator which generates control and data signals for the input/output bus interface.

CLAIMS:

7. A portable computing system as in claim 6:

wherein the docking station additionally includes a port for an input/output bus interface; and

wherein the second translation manager additionally includes a bus generator which generates control and data signals for the input/output bus interface.

18. A docking station as in claim 17,

wherein the docking station additionally includes a port for an input/output bus interface, and

wherein the translation manager additionally includes a bus generator which generates control and data signals for the input/output bus interface.

[Previous Doc](#)[Next Doc](#)[Go to Doc#](#)

[First Hit](#) [Fwd Refs](#) [Previous Doc](#) [Next Doc](#) [Go to Doc#](#)

☐ [Generate Collection](#) [Print](#)

L7: Entry 29 of 36

File: USPT

Jan 26, 1999

US-PAT-NO: 5864708

DOCUMENT-IDENTIFIER: US 5864708 A

TITLE: Docking station for docking a portable computer with a wireless interface

DATE-ISSUED: January 26, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Croft; Daniel I.	Monmouth	OR	97361	
May; Gregory J.	Corvallis	OR	97330	
Hergett; Randy W.	Philomath	PA	97370	
Stephens; Charles S.	Corvalis	OR	97330	

APPL-NO: 08/ 650668 [\[PALM\]](#)

DATE FILED: May 20, 1996

INT-CL: [06] [G06](#) [F 13/00](#)

US-CL-ISSUED: 395/821; 395/892, 395/882, 395/500, 395/281, 370/521, 359/152

US-CL-CURRENT: [710/1](#); [370/521](#), [398/115](#), [398/118](#), [398/163](#), [710/303](#), [710/62](#), [710/72](#)

FIELD-OF-SEARCH: 395/283, 395/825, 395/282, 395/821-892, 395/500, 370/821, 389/152-164

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

[Search Selected](#) [Search ALL](#) [Clear](#)

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
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ART-UNIT: 272

PRIMARY-EXAMINER: Shin; Christopher B.

ABSTRACT:

A docking station for a portable computer includes a wireless transceiver for wireless communication with the portable computer. The docking station also includes a plurality of ports. Each port includes a physical connector for connection to, for example, one or more peripheral devices, a network or a monitor. A translation manager within the docking station manages translation of information transferred between the wireless transceiver and the plurality of ports.

31 Claims, 12 Drawing figures

[Previous Doc](#)[Next Doc](#)[Go to Doc#](#)

[First Hit](#) [Fwd Refs](#)[Previous Doc](#)[Next Doc](#)[Go to Doc#](#)

Generate Collection

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L5: Entry 14 of 23

File: USPT

Jul 27, 2004

DOCUMENT-IDENTIFIER: US 6767253 B1

TITLE: Media-component docking system

Abstract Text (1):

A media docking station and is provided. A detachable media-content-receiving receiving component (MCRC) includes a connector that mates with a connection port of a docking base. The connection port operationally receives the connector. The docking base is equipped with a plurality of communications ports for communicating media content to a receiving devices inputted thorough said communications ports. In an alternative embodiment, an adapter is provided for mating a conventional MCRC with a base member.

Brief Summary Text (14):

In another aspect of the invention, an MCRC-docking system is provided. A detachable MCRC is equipped with a connector. A docking base has a connection port and can operationally receive the connector on the MCRC. Again, the docking base has a plurality of communications ports for communicating media content to a receiving device.

CLAIMS:

12. A docking base comprising: a communications port for operationally coupling a media-content-receiving component (MCRC) to the docking base and communicating media content from an external source through the MCRC to a receiving device; a media-input port for receiving the media content; and a media-output port for communicating the media content to the receiving device; wherein the media-input port and the media-output port are coupled together to provide a loop-through pathway in the absence of the MCRC, the loop-through pathway allowing all or a portion of the media content to be communicated from the media-input port through the media-output port to the receiving device in the absence of the MCRC.

31. A docking structure comprising: a docking base having a first plurality of communications ports including a coaxial-connector port on an interior face coupled to a second plurality of communications ports on an exterior face, said first plurality of communications ports including a coaxial-connector port and situated to operationally receive a conventional media-content-receiving component (MCRC) and said second plurality of communications ports adapted to communicate media content through said docking base and said MCRC to a receiving device.

33. A method for providing for the communication of media content from a media source to a receiving device, comprising: providing a media-content-receiving component (MCRC) adapter having a first face and a second face, said first face having a first plurality of communications ports for operationally attaching said adapter to an MCRC and said second face having a connector coupled to said first plurality of communications ports; and providing a docking base having an interior and exterior face, said exterior face having a second plurality of communications ports for communicating media content to a receiving device and said interior face having a connection port for receiving said adapter via said connector.

37. A detachable media-content-receiving component (MCRC) comprising: a